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The U.S. Trade Situation for Fruit and Vegetable Products

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Summary

Over the last decade, there has been a growing U.S. trade deficit in fresh and processed fruits and vegetables. Although U.S. fruit and vegetable exports totaled more than $7 billion in 2011, U.S. imports of fruits and vegetables exceeded $18 billion, resulting in a gap between imports and exports of $11.2 billion (excludes nuts and processed nut products). This trade deficit has widened over time—despite the fact that U.S. fruit and vegetable exports have continued to rise each year—because growth in imports has greatly outpaced export growth. As a result, the United States has gone from being a net exporter of fresh and processed fruits and vegetables in the early 1970s to being a net importer of fruits and vegetables today.

A number of factors shaping current competitive market conditions worldwide, and global trade in fruits and vegetables in particular, partially explain the rising fruit and vegetable trade deficit. These include:

- a relatively open domestic import regime and lower average import tariffs in the United States, with products from most leading suppliers entering the U.S. duty-free or at preferential duty rates;
- increased competition from low-cost or government-subsidized production;
- continued non-tariff trade barriers to U.S. exports in some countries, such as import and inspection requirements, technical product standards, and sanitary and phytosanitary (SPS) requirements;
- opportunities for counter-seasonal supplies, driven in part by increased domestic and year-round demand for fruits and vegetables; and
- other market factors, such as exchange rate fluctuations and structural changes in the U.S. food industry, as well as increased U.S. overseas investment and diversification in market sourcing by U.S. companies.

In the buildup to the 2008 farm bill (Food, Conservation, and Energy Act of 2008, P.L. 110-246), the trade situation contributed to demands by the U.S. produce sector that Congress consider expanding support for domestic fruit and vegetable growers in farm bill legislation. Historically, fruit and vegetable crops have not benefitted from the federal farm support programs traditionally included in the farm bill, compared to the long-standing support provided to the main program commodities (such as grains, oilseeds, cotton, sugar, and milk).

The 2008 farm bill provided additional support for specialty crop programs, as well as organic programs. The farm bill also reauthorized two programs intended to address existing trade barriers and marketing of U.S. specialty crops, including (1) USDA's Market Access Program (MAP) promote domestic agricultural exports, including specialty crops and organic agriculture; and (2) Technical Assistance for Specialty Crops (TASC) to address sanitary and phytosanitary (SPS) and technical barriers to U.S. exports.

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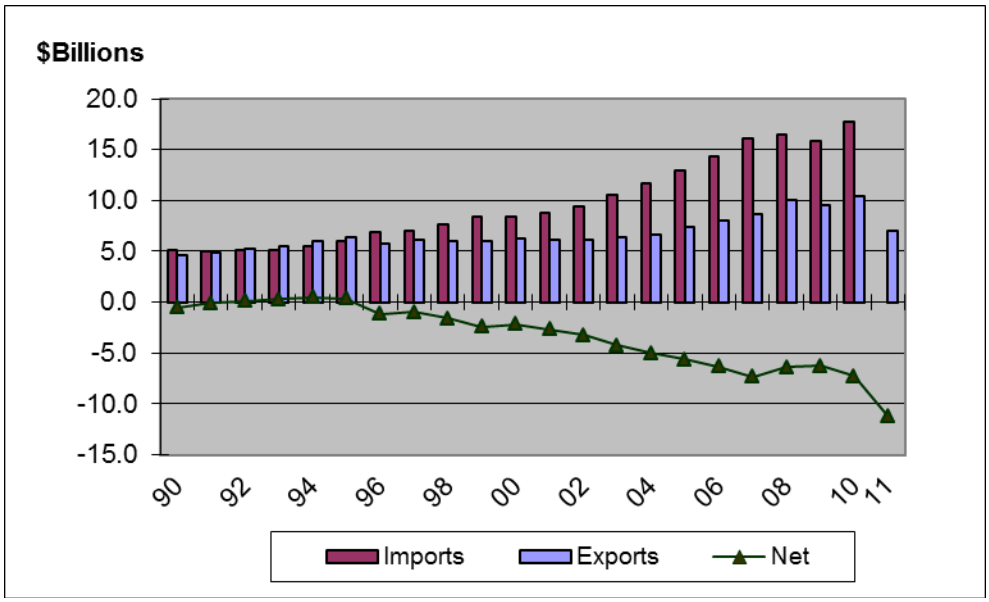
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Over the last decade there has been a growing U.S. trade deficit in fresh and processed fruits and vegetables. Although U.S. fruit and vegetable exports totaled more than $7 billion in 2011, U.S. imports exceeded $18 billion, resulting in a gap between imports and exports of $11.2 billion for the year (**Figure 1**). This trade deficit has widened over time, as growth in imports has greatly outpaced export growth. As a result, the United States has gone from being a net exporter of fruits and vegetables in the 1970s to having a net trade balance in the mid-1990s to being a net importer today.

Figure 1. U.S. Fruit and Vegetable Trade (Excluding Nuts), 1990-2011



Source: Compiled by CRS from data in the U.S. International Trade Commission's Trade DataWeb database (version 2.8.4). Includes fresh and processed products; excludes nuts.

A number of factors are shaping current competitive market conditions worldwide and global trade in fruits and vegetables. In the buildup to the 2008 farm bill (Food, Conservation, and Energy Act of 2008, P.L. 110-246), the trade situation contributed to demands by the U.S. produce sector that Congress consider expanding support for domestic fruit and vegetable growers in farm bill legislation. Historically, specialty crops[1] have not benefitted from the federal farm support programs traditionally included in the farm bill, compared to the long-standing support provided to the main program commodities (such as grains, oilseeds, cotton, sugar, and milk). The 2008 farm bill contained provisions for additional support for specialty crop programs (which include fruits and vegetables) and organic programs, as well as provisions intended to address existing trade barriers and marketing of U.S. specialty crops.

This report presents recent trends in U.S. fruit and vegetable trade, and highlights some of the factors contributing to these trends. This summary excludes trade data for tree nuts and processed tree nut products. Although not presented here, U.S. exports and imports of tree nuts and processed tree nut products (excluding peanuts) have shown continued increases, with a growing trade surplus of $5.5 billion in 2011.

[1] Specialty crops include fruits and vegetables, tree nuts (not including peanuts), dried fruits, nursery crops, and floriculture, as defined by the Specialty Crops Competitiveness Act of 2004 (P.L. 108-465).

Fruit and Vegetable Trade Situation

Summary

The U.S. trade deficit in fresh and processed fruits and vegetables totaled $11.2 billion in 2011, following a decade of steady gains in U.S. imports, with more variable gains in U.S. exports (**Table 1**, **Figure 1**). In the early 1990s, U.S. imports and exports of fresh and processed fruits and vegetables were more or less in balance, with some years showing the United States as a net exporter. This situation reversed in the mid-1990s. Despite rising U.S. exports of fruits and vegetables, growth in U.S. imports has outpaced export growth. Since the 1990s, imports have grown by an average of about 6% each year, whereas exports grew an average rate of about 2% during the same period, measured in terms of trade value (**Table 1**). The gap between imports and exports has grown from $0.5 billion in 1990 to more than $11 billion in 2011. The gap had narrowed between 2008 and 2010, but widened again in 2011 owing to a sharp increase in reported imports accompanied by a sharp decrease in exports. This deficit cannot be solely explained by imports of bananas (**Table 1**), which are generally not grown in the United States.

Table 1. U.S. Fruit and Vegetable Trade, 1990-2007

($ billions)

Product Category	1990	1995	2000	2005	2010	2011	% Change 1990-2011[a]
Imports							
Fresh, dried, frozen fruit	1.3	1.8	2.6	4.3	5.6	6.3	14%
Fresh, dried, Bananas	0.9	1.1	1.1	1.1	1.4	1.6	5%
Fresh, dried, frozen, preserved veg.	1.8	2.3	3.2	4.8	7.3	6.3	11%
Processed fruits and vegetables	2.0	1.9	2.5	3.8	4.8	5.6	9%
Total	**5.1**	**6.0**	**8.4**	**13.0**	**17.7**	**18.2**	**11%**
Exports							
Fresh, dried, frozen, preserved fruit	1.4	1.7	1.9	2.0	2.8	3.3	8%
Fresh, dried, frozen, preserved veg.	2.2	2.9	2.5	3.2	4.7	2.0	-1%
Processed fruits and vegetables	1.0	1.8	1.9	2.1	2.9	1.7	4%
Total	**4.6**	**6.4**	**6.3**	**7.4**	**10.4**	**7.0**	**4%**
Net Trade (exports less imports)							
Fresh, dried, frozen fruit	0.1	-0.1	-0.9	-2.3	-2.7	-3.0	—
Fresh, dried, frozen, preserved veg.	0.4	0.6	-0.7	-1.6	-2.6	-4.3	—
Processed fruits and vegetables	-1.0	-0.1	-0.6	-1.6	-1.9	-4.0	—
Total	**-0.5**	**0.3**	**-2.1**	**-5.6**	**-7.3**	**-11.2**	30%
Imports, Fresh, dried, bananas	0.9	1.1	1.1	1.1	1.4	1.6	5%

Source: CRS using data in the U.S. International Trade Commission's Trade DataWeb database. Includes fresh and processed products as reflected in U.S. Harmonized Tariff Schedule (HTS) chapters 07, 08, and 20, excluding nut products (HTS 801, 802, 2008.11, and 2008.19). Totals may not add due to rounding.

a. Based on compound annual rate of growth, or the year-over-year growth rate, over period.

Product Overview

Table 1 breaks down U.S. trade into three major product categories: (1) fresh fruit, including dried, frozen, or otherwise preserved, (2) fresh vegetables, including dried, frozen, or otherwise preserved, and (3) processed fruit and vegetable products.

Since the mid-1990s, the value of U.S. fruit and vegetable exports has nearly doubled, with the largest gains in exports of fresh fruits and processed products. For fresh fruits, export gains were greatest for strawberries/berries, peaches/pears, apples, grapes, and other miscellaneous fresh fruit. For fresh vegetables, export gains were greatest for lettuce, spinach, tomatoes, potatoes, and legumes/beans. For processed products, export gains were for processed potato products, certain preserved vegetables, fruit juices and juice mixtures, and other processed fruit and vegetable products.

Gains in imports, however, have exceeded those for exports, as the total value of U.S. fruit and vegetable imports has more than tripled since the 1990s. Increased imports were greatest for fresh citrus, strawberries/berries, tropical fruits (excluding bananas), grapes, peaches/pears, plums/apricots, and apples. Imports of fresh vegetables and processed products were higher across most categories. Imports of preserved mushrooms and processed tomatoes declined over the period.[2]

Together, roughly one-half of this trade deficit for fruits and vegetables was composed of bananas and fresh tomatoes and other vegetables, including bell peppers. Given that the value of U.S. banana imports has remained largely unchanged, imports of fresh tomatoes and peppers, among other fresh and frozen vegetables, have accounted for the widening gap in U.S. trade.[3] Other products with a large and increasing net trade value include other tropical fruits, grapes, asparagus, cucumbers, canned fruit, fruit juices and juice mixtures, olives, and miscellaneous fresh fruits and preserved vegetables.

Importing Country Overview

Table 2 breaks down U.S. fruit and vegetable imports from the top 10 supplying countries. In descending order (by the share of total import value in 2011), these included Mexico (36%), Canada (13%), Chile and China (8% each), Costa Rica (5%), Guatemala, Ecuador, and Peru (each with about 3%-4%), and Argentina and Thailand (2% each). Other leading import suppliers were Brazil, Spain, Honduras, and Colombia (for a combined total of 7%). All other importing countries accounted for about 9% of trade. The major imported products were tomatoes, peppers, bananas, other tropical fruits, potatoes, onions, garlic, cucumbers, melon, citrus, grapes, tree fruit, fruit juices, and various fresh and processed products.

[2] Does not include ketchup and tomato sauces (HTS 2103.2), of which the United States remains a net exporter despite increasing product imports.

[3] Both U.S. and Canadian tomato growers initiated import injury cases against each other, which were resolved in 2002 with identical rulings of no material injury; a prior case brought by U.S. growers against Mexico was suspended. See USITC, "Import Injury Investigations Case Statistics (FY 1980-2008)," February 2010, http://www.usitc.gov/trade_remedy/documents/historical_case_stats.pdf.

Table 2. Country Suppliers of U.S. Fruit and Vegetable Imports

Country	2001 ($ millions)	2011 ($ millions)	2001 Share	2011 Share (percent)	%Chg. 01-11[a]	Leading Product Imports of Fruits and Vegetables (2011)
Mexico	2,764	7,873	31%	36%	11.0%	Tomatoes, avocados, peppers, grapes, cucumbers, melons, berries, onions, cucumbers, asparagus, lemons, vegetables
Canada	1,242	2,628	14%	12%	7.8%	Potatoes, tomatoes, peppers, cranberries, cucumbers, mushrooms, beans, carrots, fresh/preserved vegetables/fruits
China	240	1,670	3%	8%	21.4%	Fruit juices, citrus, processed/frozen fruit and vegetables/fruits, onions, garlic, preserved mushrooms, stonefruit.
Chile	708	1,649	8%	8%	8.8%	Grapes, cranberries, apples, avocados, citrus, stonefruit, berries, fruit juices,
Costa Rica	621	1,012	7%	5%	5.0%	Pineapples, bananas, orange juice, melons, tropical and preserved fruits/vegetables
Guatemala	331	947	4%	4%	11.1%	Bananas, pineapples, and tropical fruits, preserved and frozen fruits/vegetables, melons, tomatoes, beans, and berries
Peru	108	706	1%	3%	20.7%	Asparagus, preserved/frozen vegetables, grapes, onions, avocados, tropical fruits
Ecuador	314	619	4%	3%	7.0%	Bananas, tropical fruits, fruit juice, peas and beans, preserved fruits/vegetables
Argentina	193	477	2%	2%	9.5%	Fruit juices, berries, olives, strawberries, grapes, garlic
Thailand	166	437	2%	2%	10.2%	Pineapples, processed fruits, beans, fruit juices, tropical/preserved fruits/vegetables
Brazil	125	398	1%	2%	12.2%	Orange juice and other fruit juices, grapes, tropical fruits and vegetables
Spain	363	381	4%	2%	0.5%	Olives, mandarins, peppers, fruit juices, cucumbers, mushrooms, stonefruit, citrus fruit and juice, preserved foods
Honduras	165	293	2%	1%	5.9%	Bananas, melons, pineapples, cucumbers, beans fresh/preserved fruits/vegetables
Philippines	155	262	2%	1%	5.4%	Fresh pineapples and juice, bananas, tropical fruits/vegetable, root vegetables
Colombia	204	246	2%	1%	1.9%	Bananas, pineapples, preserved/frozen fruits/vegetables, tropical products, fruit juices, beans, lemons, potatoes
Subtotal	**7,700**	**19,598**	**87%**	**91%**	**9.8%**	—
All Other	1,123	1,992	13%	9%	5.9%	—
Total	**8,823**	**21,590**	**100%**	**100%**	**9.4%**	—

Source: CRS using data in the U.S. International Trade Commission's Trade DataWeb database. Includes fresh and processed products (HTS categories 07, 08, and 20), excluding nut products (HTS 801, 802, 2008.11, and 2008.19). Totals may not add due to rounding.

a. Based on compound annual rate of growth, or the year-over-year growth rate, over period.

Competitive Market Situation

A number of factors are shaping current competitive market and trade conditions worldwide, and may be contributing to trends in U.S. fruit and vegetable trade:

- a relatively **open U.S. import regime** and lower average import tariffs in the United States, with products from most leading suppliers entering the U.S. duty-free or at preferential duty rates;
- increased **competition from low-cost or subsidized production** of fruit and vegetable products;
- continued **non-tariff trade barriers to U.S. exports** in some countries, including restrictive import and inspection requirements, technical product standards, and sanitary and phytosanitary (SPS) requirements;
- opportunities for **counter-seasonal supplies**, driven, in part, by increased domestic and year-round demand for fruits and vegetables; and
- **other market factors**, such as exchange rate fluctuations and structural changes in the U.S. food industry, as well as increased U.S. overseas investment and diversification in market sourcing by U.S. companies.

Domestic Import Regime

Lower tariffs on U.S. fruit and vegetable imports combined with relatively higher tariffs on U.S. exports into other countries, in part, may explain why U.S. export growth has not kept pace with import growth. The U.S. Department of Agriculture (USDA) reports that the global average tariff for fruits and vegetables is more than 50% of the import value.[4] In the United States, however, about 60% of U.S. tariffs on fruits and vegetables are less than 5%. This compares to Japan and the European Union (EU), where more than 60% of import tariffs range from 5%-25%; additionally, nearly 20% of tariffs exceed 25%. Import tariffs in some developing countries are often higher, with more than 80% of tariffs ranging from more than 25% to over 100%.[5] Countries with relatively high tariffs on fruit and vegetable imports include China, Egypt, India, Korea, and Thailand.

Most of the leading import suppliers of fruits and vegetables to the United States are granted trade preferences under an existing free trade agreement (Canada and Mexico, Australia, Chile, Peru, and several Central American and some Middle Eastern nations), pending or negotiated free trade agreements, or other types of preferential arrangements (Argentina, Brazil, Ecuador, Thailand).[6] Such trade preferences allow imports to the United States to enter duty-free or at reduced rates, and may be contributing to rapid import growth. In some cases, duty-free or reduced tariffs

[4] B. Krissoff and J. Waino, "U.S. Fruit and Vegetable Imports Outpace Exports," *Amber Waves*, USDA, June 2005. Expressed as an average; actual tariffs may vary substantially across products and countries.

[5] Ibid.

[6] For example, products from some countries are eligible for preferential treatment under the Generalized System of Preferences (see CRS Report RS22541, *Generalized System of Preferences: Agricultural Imports*). Products from some South American countries may benefit under the Andean Trade Preference Act.

provide an added advantage to supplying countries that may already benefit from lower-cost fruit and vegetable production compared to that in the United States.

Many of the countries that have entered into trade preference programs with the United States supply products such as bananas and other tropical fruits that are grown in limited supplies in the United States. Many also provide fruits and vegetables counter-seasonally (off-season) to production in the United States. However, there is concern that an increasing share of imports are now directly competing with domestically produced commodities throughout the year.

Significant gains in trade between the United States, Canada, and Mexico have followed the adoption of the North American Free Trade Agreement (NAFTA). Under NAFTA, additional market access was created for tomatoes and peppers, as tariffs were phased out or covered under a seasonal tariff-rate quota. Since the adoption of NAFTA in 1994, the volume of U.S. imports of tomatoes and certain other vegetables from Mexico has more than doubled; imports from Mexico of fresh peppers, including bell peppers, more than tripled.[7] Imports from Canada also increased significantly but from a smaller base. During this same period, U.S. shipments of fresh tomatoes have declined to these two countries, while shipments of other types of vegetables have mostly increased, but from a smaller base. Rising consumer demand has also influenced imports, given the year-round availability of a wider diversity of consumer choices, including new products and varieties, new colors, mini-varieties, and hothouse-grown produce.[8]

Since the U.S.-Chile FTA entered into force in 2004, imports of Chilean fresh fruits and fruit juice have shown continued gains. Volume imports of some fruits and vegetables have risen (grapes and raisins, cherries, strawberries, cranberries, and other types of berries, pears, kiwi, citrus, apple and grape juice). However, volume imports of some products have decreased (apples, peaches, avocados, plums). Most imports from Chile continue to be supplied during the U.S. off-season. Imports under the U.S.-Dominican Republic-Central American (DR-CAFTA) FTA, which entered into force in July 2006, are expected to be limited since many of these countries already have duty-free access to the United States under previous trading arrangements, such as the Generalized System of Preferences (GSP) and the Caribbean Basin Economic Recovery Act.

Some U.S. produce growers have complained that the recent FTAs allow greater access to the United States without creating equal U.S. access to foreign markets.[9] They further claim that with each FTA the U.S. produce sectors have been negatively impacted through higher imports, lower prices, and a growing trade deficit.

Global Competition

Among the leading U.S. fruit and vegetable import suppliers, China and most European countries do not benefit from preferential import treatment under current U.S. trade laws. However, fruit and vegetable imports from these countries are growing, partly because of their lower costs of producing, packing, and/or processing fruits and vegetables, compared to producers in the United

[7] Because of concerns about the effects of NAFTA on U.S. fresh tomato and pepper markets, the NAFTA Implementation Act (P.L. 103-182, Sec. 316) required annual monitoring of these two markets until January 1, 2009.

[8] S. R. Cuellar, *Marketing Fresh Fruit and Vegetable Imports in the United States: Status, Challenges and Opportunities*, Cornell University, April 2002.

[9] See, for example, T. Linden, "Ag Trade Surplus Wiped Out by Imports" (February 2005) and "Ag Export Surplus Continues to Shrink," *Western Grower & Shipper,* December 2004.

States. Among many developing countries, lower costs are generally associated with lower overall production and input costs, particularly for labor. Among EU countries, lower costs largely are a function of farm subsidies and payments along with other forms of government support for fruit and vegetable production, as part of the Common Agricultural Policy.

In China, average farm-level costs are low because the majority of farm production is labor-intensive on small-scale, low-technology operations, using little or no mechanized inputs. Labor is abundant and costs are low. Marketing costs for produce also are low, given only basic packing and packaging techniques, and lack of uniform product sizes and grading standards. At modernized facilities, certain capital and production technology costs are higher, but per-unit labor costs and overall input costs still remain much lower than in the United States. Given such differences, available cost data show that average per-unit production costs in China for tomatoes, peppers, and citrus are roughly one-tenth those in the United States.[10]

By comparison, U.S. production costs are relatively high and have been increasing due to generally rising costs for energy and other farm inputs, but also because of what some analysis indicates has been an increasing regulatory regime, particularly in California, where a high portion of the nation's fruits and vegetables are grown. A survey of California agricultural producers ranked workers' compensation requirements, air quality, and land use regulations as the top three regulatory areas that have a perceived negative effect on farmers' financial, operational, and managerial aspects of production.[11] The study estimates that $1 of every $9 of farm capital investment goes toward regulatory compliance. On labor issues, another study ranked the United States among countries with the highest rates of workers' compensation and unemployment insurance.[12] Immigration issues are also a key concern, which may be contributing to a growing perception of a shortage of available farm workers in some production areas, especially for harvesting tree fruits and specialty row crops.[13]

Farm costs in the EU also are relatively high. However, fruit and vegetable producers in most European countries directly benefit from support programs that effectively offset their production costs and allow them to become competitive on world markets. The EU's fruit and vegetable subsidies vary by commodity, but often include direct farm payments, compensation for further processing, co-financing of operational funds for producer organizations, export subsidies, promotional aid, and other types of support and financial aid.[14] Commodities that benefit under

[10] S. Rozelle et al., "Rising Demand, Trade Prospects, and the Rise of China's Horticultural Industry," 2007, http://iis-db.stanford.edu/pubs/21634/Rising_Demand_Trade_Prospects_Rise_of_Hort_NAAMIC_working_paper.pdf.

[11] S. Hurley et. al, *Analysis of the Regulatory Effects on California Specialty Crops: An Examination of Various Issues Impacting Selected Forest Products, Tree Fruit, Nut, and Vegetable Crop Industries*, California Polytechnic State University, January 2006.

[12] S. Hurley, *Comparison between California and its Domestic and International Competitors with Respect to Key Labor Issues,* California Polytechnic State University, June 2004. Other regulatory areas included water quality regulation, pesticide application and registration.

[13] Western Growers Association (WGA), "Western Growers Warns of Labor Shortage Crisis," *WGA Press Release*, September 13, 2005; California Farm Bureau Federation (CFBF), "Farm labor shortage approaches critical level," *CFBF AgAlert,* September 14, 2005. Among the reported reasons for this perceived worker shortage are increasingly competitive wages within both the agriculture sectors and between the agriculture and non-agriculture sectors, particularly higher-paying construction work given ongoing development. Also see CRS Report RL30395, *Farm Labor Shortages and Immigration Policy*.

[14] For more detailed information, see Council Regulations (EC) 1182/2007 of 26 September 2007 and Commission Regulation (EC) No 1580/2007 of 21 December 2007. Also see, European Commission, "Reform of the Common Market Organisation for Fruit and Vegetables," http://ec.europa.eu/agriculture/capreform/fruitveg/index_en.htm.

such programs include tomatoes, cauliflowers, cucumbers, artichokes, olives, peaches, pears, plums, apples, citrus, grapes, and figs, among others. The total value of support notified to the World Trade Organization (WTO) for EU's fruit and vegetable sector (including wine and olive oil) is estimated at about $7.2 billion for the 2006/2007 marketing year.[15] Such support is considered to be "production distorting" by the WTO and is subject to reduction commitments. Comparable expenditures for the U.S. fruit and vegetable sectors were negligible.

In the United States, fruit and vegetable producers do not directly benefit from traditional federal farm support programs that might help offset their production costs. However, they may benefit indirectly from certain government research and farm assistance programs that are generally not considered "production distorting."[16] The European Commission has been implementing reforms to the current subsidy program for fruits and vegetables that could increase the sector's market orientation.[17] Even with reforms, the EU's program would continue to provide government-funded income support and risk protection not similarly afforded to U.S. producers.

Most developing countries do not directly support their fruit and vegetable production. However, some have government-funded programs that help farmers obtain specific varieties, adopt better farming practices, provide research and agricultural extension services, promote exports, and provide market information. In some countries, preferential policies and support exist at the local government level, and may include production subsidies or income guarantees, or assistance with start-up costs.

Previous investigations by the U.S. International Trade Commission (USITC) have highlighted the increased competitive market and trade pressures on U.S. fruit producers from lower-cost foreign fruit and vegetable producers (such as those in China, Thailand, Chile, Argentina, and South Africa) as well as from countries with subsidized fruit and vegetable production (such as in the EU, including Spain).[18] Import injury investigations initiated by the United States further highlight concerns that some countries might be supplying imports at prices below fair market value. Since the 1990s, dumping petitions filed by the U.S. fruit and vegetable sectors have included charges against imports of fresh tomatoes (Canada, Mexico), frozen raspberries (Chile), apple juice concentrate (China), frozen orange juice (Brazil), lemon juice (Argentina, Mexico), fresh garlic (China), preserved mushrooms (China, Chile, India, Indonesia), canned pineapple (Thailand), table grapes (Chile, Mexico), and tart cherry juice (Germany, former Yugoslavia).[19] Many of these petitions were decided in favor of U.S. domestic producers and resulted in higher tariffs being assessed on U.S. imported products from some of these countries.

[15] Based on EU notifications to the WTO, and reflects notified aggregate measure of support (AMS). For more information, see CRS Report R41713, *U.S. and EU Agricultural Support: Overview and Comparison*.

[16] See CRS Report R42771, *Fruits, Vegetables, and Other Specialty Crops: Selected Federal Programs*.

[17] For information, see the European Commission's "Reform of the Common Market Organization for Fruits and Vegetables" at http://ec.europa.eu/agriculture/capreform/fruitveg/index_en.htm.

[18] USITC, *Conditions of Competition for Certain Oranges and Lemons in the U.S. Fresh Market*, Inv. 332-469, July 2006; USITC, *Canned Peaches, Pears, and Fruit Mixtures: Conditions of Competition between U.S. and Principal Foreign Supplier Industries*, Inv.332-485, December 2007. Reports available at http://www.usitc.gov.

[19] USITC, "Import Injury Investigations Case Statistics (FY 1980-2009)," February 2010, http://www.usitc.gov/trade_remedy/documents/historical_case_stats.pdf.

Non-Tariff Trade Barriers

In addition to tariff-related barriers to trade, market access of agricultural products may be restricted by non-tariff trade barriers, which may limit both U.S. exports to and imports from other countries. Non-tariff trade barriers vary widely by importing country and commodity, and may include, but are not limited to, import and inspection requirements, safety and product standards, and requirements regarding inputs, production, processing, and mitigation. Generally, individual country requirements are provided for under WTO agreements that allow governments to act on trade matters in order to protect human, animal or plant life or health, provided they do not discriminate or use restrictions as disguised protectionism.[20]

There are two specific WTO agreements dealing with food safety and animal and plant health and safety, and with product standards in general: (1) the Agreement on Sanitary and Phytosanitary (SPS) Measures, and (2) the Agreement on Technical Barriers to Trade (TBT). The SPS Agreement is designed to protect animals and plants from diseases and pests, and to protect humans from animal- and plant-borne diseases and pests, and food-borne risks. The TBT Agreement covers technical regulations, voluntary standards and procedures relating to health, sanitary, animal welfare, and environmental regulations.[21] Actual SPS/TBT requirements span across several broad categories and types, but tend to vary widely depending on the commodity and the importing country (as shown in the box on page 11).[22]

Among the more common SPS/TBT examples for produce imports and exports are restrictions due to pest or disease concerns, and requirements specifying certain post-harvest treatment and fumigation.[23] Other requirements that reportedly have inhibited U.S. fruit and vegetable exports to some countries are phytosanitary requirements, food safety protocols, and marketing standards.

A summary of the current U.S. concerns regarding SPS and TBT issues across all agricultural commodities and U.S. trading partners is provided in annual reports compiled by the Office of the United States Trade Representative (USTR).[24]

A summary of some of the reported SPS/TBT barriers to U.S. produce exports follows:[25]

- **disease transmission**—e.g., fire blight, brown rot, canker, potato wart, fungus, among others, and other unspecified diseases;

[20] See WTO, "Understanding the WTO: The Agreements (Standards and Safety)."

[21] The SPS Agreement entered into force on January 1, 1995, as part of the establishment of the WTO, following the Uruguay Round of the General Agreement on Tariffs and Trade (GATT). The TBT Agreement resulted from the Tokyo Round in 1979.

[22] See CRS Report RL33472, *Sanitary and Phytosanitary (SPS) Concerns in Agricultural Trade*; USD A, *Analyzing Technical Barriers to Trade*, TB1876, March 1999; and F. J. Adcock, "Examining and Reducing Technical Barriers to Trade," CNAS 98-3, October 1998, Texas A&M University.

[23] Examples within animal product trade include recent trade bans because of bovine spongiform encephalopathy (BSE), or "mad cow" disease, as well as the current EU ban of U.S. beef because of hormones used in production.

[24] USTR's annual reports—Report on Sanitary and Phytosanitary Measures and Report on Technical Barriers to Trade—are available at http://www.ustr.gov.

[25] USDA horticulture trade reports for select products and countries: USDA, *U.S. Specialty Crops Trade Issues,* annual reports to Congress (2008 and 2009). Also USDA, *FAS Guide To World Horticultural Trade,* Trade Issues Editions, Circular Series FHORT 1-05 (May 2005) and 4-03 (May 2004), submitted as a Report to Congress, as required under the Specialty Crops Competitiveness Act of 2004 (P.L. 108-465).

- **pest transmission**—e.g., coddling moth, golden nematode, fruit flies, moths, among others, and other unspecified quarantine pests;
- **chemical and pesticide residues**—e.g., methyl bromide, hydrogen gas; also Maximum Residual Levels (MRLs) for certain pesticides;
- **treatment and mitigation requirements**—e.g., chemical and other treatment options, including fumigation and quarantine;
- **restrictive import and administrative procedures—**e.g., specific inspection requirements for import;
- **other administrative requirements**—e.g., protocols, risk assessments, waivers, licenses, import tolerances, packaging requirements;
- **import bans on products from specific producing areas**—e.g., because of specific pest or disease concerns particular to a region;
- **import bans on production inputs**—e.g., nursery stock, seeds;
- **product and/or processing specifications**—e.g., restrictions on the use of antimicrobials, sulfur dioxide, sorbic acid, potassium sorbate, biotech and genetic materials, wax coating, etc.; and
- **health risks—**depending on product and perceived risk.

Non-tariff barriers to trade remain a key concern to U.S. produce growers. For example, under the U.S.-Korea FTA, despite tariff liberalization and increases in tariff-rate quotas for many fruits and vegetables, phytosanitary barriers have restricted U.S. exports to Korea of most key fresh fruits, including apples, pears, peaches, and citrus.[26] Also, exports of U.S. fresh potatoes to Mexico can currently only be shipped within a 26-kilometer zone inside the U.S.-Mexico border.[27] Similar restrictions and other technical barriers also have limited U.S. fruit and vegetable exports with other key U.S. trading partners, including Argentina, Australia, Brazil, Canada, China, EU, India, Israel, Japan, Korea, Mexico, New Zealand, South Africa, Taiwan, and Venezuela.[28] Aside from governmental requirements, retailers in some countries have developed required standards and practices and require certification as a prerequisite for doing business. For example, EU's retail-based GLOBALGAP (formerly known as EUREPGAP) for fruits and vegetables specifies a list of requirements regarding traceability; recordkeeping; varieties and rootstocks; site history and management; soil and substrate management; fertilizer usage; irrigation; crop protection; harvesting; post-harvest treatments; waste and pollution management; recycling and reuse; worker health, safety, and welfare; environmental issues; complaint form; and internal audits.[29]

[26] See Northwest Horticultural Council, 2009 Foreign Trade Priorities, http://www.nwhort.org/TradePriorities.html; and Report of the Agricultural Technical Advisory Committee on Trade in Fruits and Vegetables on the U.S.-Korea FTA, April 2007. See also comments submitted to the U.S. Trade Representative from Mark Powers, Northwest Horticultural Council, "Request for Public Comments to Compile the National Trade Estimate Report on Foreign Trade Barriers and Reports on Sanitary and Phytosanitary and Standards-Related Foreign Trade Barriers," Docket USTR-2009-0031 (www.regulations.gov).

[27] U.S. Potato Board, "Stock Potatoes—Export Long Range Plan," http://www.uspotatoes.com.

[28] USDA, *U.S. Specialty Crops Trade Issues,* annual reports to Congress (2008 and 2009); and USDA, *FAS Guide To World Horticultural Trade* (2004 and 2005). Also see USTR's two annual reports for all traded products: *Report on Sanitary and Phytosanitary Measures*, and *Report on Technical Barriers to Trade*, http://www.ustr.gov/.

[29] See GLOBALGAP requirements at http://www.globalgap.org/cms/front_content.php?idcat=9.

Broad SPS/TBT Categories

SPS Categories:

- additives and pesticide residues/use;
- plant pests and diseases;
- microbiological contaminants;
- chemical contaminants;
- genetically modified plants;
- irradiation; and
- various overlapping technical requirements, such as labeling and standards, including Good Agricultural Practices (GAP) or land-use practices, use of third party auditors, etc.

TBT Categories:

- import quotas and administration (such as licensing and auctions);
- export limitations and bans;
- food laws, including quality standards, safety and industrial standards, and organic certification;
- input, process, and product standards, including domestic content and mixing requirements, rules-of-origin requirements;
- packaging standards and labeling requirements;
- laws and import procedures, including media advertising regulations;
- consumer and food safety regulations—e.g., labeling, packaging, pesticide residue testing, nutritional content labeling, and contamination prevention;
- measures to prevent consumer fraud—e.g., shipping and financial documentation, standards of identity and measurement, etc.

However, many U.S. trading partners point to U.S. phytosanitary and other technical requirements as possible barriers restricting imports of these same commodities from other countries. In the United States, USDA's Animal and Plant Health Inspection Service (APHIS) regulates fresh produce imports through phytosanitary certificates, importation rules, and inspections.[30] U.S. imports of some fresh fruits and vegetables also are subject to federal marketing orders that require written permits for imported fresh produce, or create mandatory grade, size, quality and maturity requirements that apply to domestic and imported products.[31] For information, see CRS Report R42771, *Fruits, Vegetables, and Other Specialty Crops: Selected Federal Programs*.

[30] 7 C.F.R. Part 319.56 requires written import permits for fresh produce and also lists detailed foreign quarantine notices for fruit and vegetables.

[31] Agricultural Marketing Agreement Act of 1937, Section 8e. Currently applies to avocados, dates (other than dates for processing), hazelnuts (filberts), grapefruit, table grapes, kiwifruit, olives (other than Spanish-style), onions, oranges, Irish potatoes, plums (suspended), prunes (suspended), raisins, tomatoes, and walnuts.

Seasonal Supplies

As consumer demand for fruits and vegetables has grown, the United States has become a growing market for off-season fruit and vegetable imports. Most counter-seasonal trade occurs between the Northern and Southern Hemisphere countries, which often tend to have opposite production cycles. Improvements in transportation and refrigeration also have made it easier to ship fresh horticultural products. Counter-seasonal U.S. imports of fruits and vegetables are supplied by Chile, Argentina, Australia, and South Africa, but also to some extent Mexico and some Central American countries.

Counter-seasonal imports from these countries are said to complement U.S. production of fresh grapes, citrus, tree fruits, and berries. However, technological and production improvements are further influencing this trend. In particular, the development of early- and late-maturing varieties has expanded U.S. production seasons, allowing producers to grow many types of fruits and vegetables throughout the year. As the U.S. production season has expanded, the winter window for some imports has narrowed. As a result, imports of some fruits and vegetables are directly competing with U.S. production. These include fresh tomatoes, peppers, potatoes, onions, cucumbers, melon, citrus, grapes, apples, and other tree fruits. Imports of processed fruit and vegetable products, such as fruit juices and various processed fruits and vegetables, directly compete with U.S. processed products year-round.

Imports of counter-seasonal fruits and vegetables are generally considered to have a positive impact on U.S. consumer demand by ensuring year-round supply and by introducing new products and varieties, which often stimulate additional demand. Other perceived market benefits include lowering costs (given a wider supply network), improving eating quality, assuring food safety, conducting promotions, and reducing product losses. For example, imports of fresh tomatoes may have contributed to increased overall demand by providing for the introduction of new domestic varieties, including hothouse-grown tomatoes, that are valued by consumers for their taste, perceived higher and consistent quality, and wider year-round availability; similarly, imports of peppers, cucumbers, and sweet onions have contributed to increased demand through the introduction of new colors, mini-varieties, and other highly regarded product qualities.[32]

This expansion in consumer choice has contributed to overall higher demand for fruits and vegetables. Between 1980 and 2010, per capita consumption of all fresh and processed fruits and vegetables increased from roughly 600 pounds to a high of more than 710 pounds in the late 1990s, and dropping back to about 650 pounds in 2010.[33] Gains in consumption, in turn, necessitate the need for year-round supplies, resulting in higher counter-cyclical import demand. During the period from 1980 to 2005, imports as a share of total domestic consumption nearly doubled from about 27% to nearly one-half for all fresh fruits, and more than tripled from 8% to about 25% for all fresh vegetables (**Table 3**). These averages mask even greater import gains for some commodities. Imports of grapes, asparagus, and garlic, for example, accounted for roughly 10% of consumption in 1980 and altogether now account for at least 50%. More recent USDA estimates show continued growth in imports as a share of all fruit and vegetable consumption in the United States.

[32] S. R. Cuellar, *Marketing Fresh Fruit and Vegetable Imports in the United States: Status, Challenges and Opportunities*, Cornell University, March 2003.

[33] USDA's Food Availability (Per Capita) Data System, http://www.ers.usda.gov/data-products/food-availability-(per-capita)-data-system.aspx. Fresh weight equivalent.

Table 3. Import Share of U.S. Fresh Fruit and Vegetable Demand

Category	1980	1990	2000	2005	2010
			(percent)		
All Fresh Fruit	**26.7**	**34.9**	**42.4**	**45.6**	**48.8**
All Fresh Vegetables	**8.0**	**10.3**	**13.2**	**17.7**	**24.5**
Apples	4.0	4.7	7.3	7.0	6.8
Asparagus	10.8	29.8	59.0	72.2	89.1
Broccoli	0.2	2.5	6.6	11.6	14.8
Carrots	7.8	5.9	6.4	7.7	13.4
Cherries	1.0	3.8	3.6	8.2	11.0
Cucumbers	36.0	33.7	42.6	52.1	61.8
Garlic	12.5	17.4	29.0	48.0	59.5
Grapes	13.6	37.0	45.2	54.9	50.3
Lettuce	<0.5	<0.5	<0.5	1.9	4.4
Melon	10.3	15.5	25.1	26.6	28.9
Onion	5.5	10.1	9.1	11.1	14.5
Oranges	0.7	0.9	3.1	4.6	7.8
Peaches/Nectarines	0.6	8.0	6.5	11.0	7.5
Peppers	26.5	38.9	33.8	46.9	53.1
Plums	0.5	13.4	15.5	26.6	25.0
Strawberries	2.8	4.0	5.4	7.1	8.9
Tomatoes	22.3	20.5	30.0	35.2	52.3

Source: Calculated by CRS from USDA Supply and Disappearance data, including *Vegetables and Pulses Yearbook* data, Supply and Utilization tables and *Fruit and Tree Nut Yearbook* data, Table H-12. Expressed as quantity of imports' share of total disappearance.

There also is concern that the availability of imports may be lowering prices for fruits and vegetables because of increasing overall supplies. However, between 1980 and 2005, prices paid for fresh fruits and vegetables remained strong and, in many cases, about doubled for all fruits and vegetables, including processed products.[34] Although price changes may vary for individual commodities, prices have shown increases over the period overall.

Other Market Factors

Among other market factors widely known to contribute to shifts in global agricultural trade are exchange rate fluctuations and structural changes in the U.S. food industry, including increased U.S. overseas investment and diversification in market sourcing by U.S. companies.

Generally, as the dollar depreciates against foreign currencies, U.S. exports become more competitive and relatively less expensive than commodities produced domestically in the

[34] Bureau of Labor Statistics, http://www.bls.gov/cpi/. Consumer price index data.

importing country, indicating a subsequent increase in price competitiveness for U.S. exports or a relative increase in import prices. Conversely, as the U.S. exchange rate appreciates (stronger dollar), U.S. exports may become less competitive or relatively more costly.[35] Information from USDA's Agricultural Exchange Rate Data Set indicates that as the U.S. dollar has steadily depreciated each year since 2002, U.S. agricultural products, including fruit and vegetable exports, have likely become more price competitive. However, the extent to which this will actually result in reduced prices on imported products in a foreign country will ultimately depend on how much an exporter or importer is willing to pass on to customers.[36] Monetary policies within a country, such as China's fixed exchange rate, may also affect its export potential by influencing relative price differences between countries. Further appreciation of the Chinese exchange rate could make imports more affordable, thus raising U.S. agricultural exports.[37]

Other factors reportedly influencing produce trade are evolving business practices in how produce is marketed and sold. A USDA study highlights some of these factors for the produce industry.[38] They include increased consolidation and concentration in the retail and shipping sectors, and the emergence of new industry trade practices including increased use of fee-based services, additional packaging and certification requirements, increased use of contract and marketing agreements with buyers, and development of emerging technologies and improved transportation. The extent to which these factors may be influencing the individual produce sectors varies by commodity and also by marketing channel (e.g., retail versus food service sectors). Structural changes in the U.S. food industry are further influenced by other economic and market changes that are occurring, including increased diversification in supply sourcing and increased foreign investment and global integration by U.S. agribusiness firms.

A growing share of U.S. fruit and vegetable trade (both imports and exports) is carried out by U.S. and foreign multinational companies or enterprises. These companies may produce the products they trade, while some may only further process products and some companies only trade the products of other firms. Among the reasons why companies choose to extend their businesses globally are to build a global supply base to ensure continued, year-round supplies to meet demand, but also to source lower-cost production in countries with relatively lower input and technology costs, particularly for labor. These trends may have been facilitated by the cross-national economic and financial integration that has followed bilateral and multilateral agreements among countries.[39]

The increasing importance of multinational companies and their role in international trade complicates an analysis of global trade statistics. This includes cases where a U.S. company has subsidiaries located overseas, where products are produced and processed, but marketed under the company's own branded labels; in other cases, a U.S. company may import foreign processed products made from U.S.-exported raw material abroad only to be re-imported to the United States as finished products. For example, a recent USITC import investigation highlights how U.S.-based Dole Food Company owns and operates fruit canneries in Thailand that rely largely

[35] For more information, see Kristinek, J., and D.P. Anderson, "Exchange Rates and Agriculture: A Literature Review," Working Paper 02-2, February 2002, Texas A&M University.

[36] See, for example, USDA's Agricultural Exchange Rate Dataset.

[37] USDA, *China Currency Appreciation Could Boost U.S. Agricultural Exports*, WRS-0703, August 2007.

[38] USDA, *U.S. Fresh Fruit and Vegetable Marketing: Emerging Trade Practices, Trends, and Issues*, AER-795, January 2001.

[39] L. Bloodgood, et al., "Trends in U.S. Inbound and Outbound Direct Investment," USITC Pub. 3870, July 2006.

on imported fruit from the United States to produce canned peach, pear, and mixed fruit products, which are repackaged into plastic jars and cups in Thailand, and then re-exported back to the United States in the form of retail-ready products.[40] Thailand's competitive advantages in producing canned fruit are based primarily on relatively inexpensive labor and technological investments provided by Dole Food Company, which accounts for the majority of Thailand's peach and pear canning industry through its subsidiary Dole Thailand Ltd. Thailand is currently a leading global exporter of canned peaches, pears, and fruit mixtures, despite its insignificant domestic production of fresh peaches and pears.

Many U.S. companies are implementing business strategies that source complementary fruit and vegetable products globally, which some argue may compete with domestically produced product. An import injury investigation brought by U.S. mushroom processors highlights competition concerns by some domestic producers about competition from imports of transnational production by U.S.-based multinational companies. Among the marketers of preserved mushrooms participating in the case was General Mills, Inc., which imports a range of food products produced and processed by its subsidiaries overseas (in Indonesia and India among other countries), including preserved mushrooms that are marketed under its Green Giant brand. Among the reasons General Mills officials cite for establishing overseas operations are year-round product availability and lower labor costs.[41]

Some companies do not own and operate foreign operations, but instead enter into licensing arrangements with other foreign companies who produce, pack, or process products, which are marketed under the company's own branded labels and either sold in the United States or in other foreign markets. Examples of such firms were described in another USITC import investigation into the global sourcing strategies among the major global suppliers of fresh oranges and lemons. Reasons cited by some U.S. produce companies for implementing global business strategies include the desire to source complementary fruit and vegetable products globally to meet year-round demand, reduce processing costs, and build an international customer network and brand recognition.[42]

Congressional Action

Starting in 2005, the Specialty Crop Farm Bill Alliance began promoting recommendations for the 2008 farm bill, initially through the efforts of the United Fresh Produce Association.[43] These efforts were expanded to include 85 specialty crop organizations nationwide. The alliance's goal has been to enhance the competitiveness of U.S. fruits, vegetables, tree nuts, and other specialty crops by adding specific programs and provisions as part of the 2008 farm bill.[44]

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[40] USITC, *Canned Peaches, Pears, and Fruit Mixtures: Conditions of Competition between U.S. and Principal Foreign Supplier Industries*, Inv. 332-485, December 2007. Most imports to Thailand are supplied in institutional-size cans.

[41] Hearing before USITC, regarding certain preserved mushrooms from Chile, China, India, and Indonesia, Inv. 731-TA-776-779, September 9, 2004.

[42] See, for example, "A Cooperative Evolution—Sunkist Competes in the Global Market," a presentation by Sunkist Inc. officials at the USDA Agricultural Outlook Forum, February 20, 2004; and USDA, *U.S. Fresh Fruit and Vegetable Marketing: Emerging Trade Practices, Trends, and Issues*, AER-795, January 2001.

[43] The association represents the produce industry, and resulted under a 2006 merger of the United Fresh Fruit & Vegetable Association and the International Fresh-Cut Association.

[44] See United Fresh Produce Association, http://www.unitedfresh.org/newsviews/farm_bill.

In the buildup to the 2008 farm bill (Food, Conservation, and Energy Act of 2008, P.L. 110-246), the trade situation contributed to demands by the U.S. produce sector that Congress consider expanding support for domestic fruit and vegetable growers in farm bill legislation. Historically, fruit and vegetable crops have not benefitted from the federal farm support programs traditionally included in the farm bill, compared to the long-standing support provided to the main program commodities (such as grains, oilseeds, cotton, sugar, and milk). The 2008 farm bill contained a horticultural title that included new and expanded provisions for specialty crops and organic production. Among the 2008 farm bill's key trade-related provisions are those that specifically address SPS/TBT issues in the specialty crops sectors, as well as those that generally address export market promotion and barriers to U.S. trade:[45]

- **Market Access Program (MAP).** Reauthorized MAP funding to encourage domestic exports, and included an amendment to cover organic products.[46] MAP funds cost sharing of foreign market promotion activities.
- **Technical Assistance for Specialty Crops (TASC).** Reauthorized TASC program to address SPS and technical barriers to U.S. exports, and required an annual congressional report describing factors that affect specialty crops exports.[47] Eligible projects include seminars and workshops, study tours, field surveys, pest and disease research, and pre-clearance programs.

In addition, the 2008 farm bill provided for increased market data and information on the specialty crops sectors (Sections 10107 and 10103), provided for expanded plant pest and disease management and detection (Sections 10201 and 10202), and addressed specialty crop food safety and related research issues (e.g., Sections 7311, 10105, and 10109), among other provisions. The bill also amended current marketing orders for avocados (Section 10108) and clementines (Section 10102), governing grades and standards for these commodities and requiring that imports meet similar standards.

Many of these provisions—among other provisions geared toward specialty crop production, promotion, and research—are maintained and in some cases expanded in both the House-passed and Senate-passed farm bills that were debated during the 113th Congress.[48]

Information on these and other farm bill provisions directed to the specialty crop sectors is in CRS Report R42771, *Fruits, Vegetables, and Other Specialty Crops: Selected Federal Programs*.

[45] Two SPS-related provisions that were proposed as part of the 2008 Senate-reported farm bill (H.R. 2419), however, were dropped during conference negotiations. One provision proposed that USDA and the U.S. Trade Representative increase attention to specialty crop SPS trade issues and develop a strategic risk management framework. Another provision would have required the Government Accountability Office (GAO) to investigate the impact on specialty crops of reducing foreign trade barriers and to prepare a strategy for addressing the issue.

[46] For more information, see USDA, http://www.fas.usda.gov/programs/market-access-program-map.

[47] For more information, see USDA, http://www.fas.usda.gov/programs/technical-assistance-specialty-crops. For purposes of TASC, a "specialty crop" is defined as "all cultivated plants and the products thereof produced in the United States except wheat, feed grains, oilseeds, cotton, rice, peanuts, sugar, and tobacco."

[48] For more information, see CRS Report R43076, *The 2013 Farm Bill: A Comparison of the Senate-Passed (S. 954) and House-Passed (H.R. 2642, H.R. 3102) Bills with Current Law.*

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